Will the Metaverse Be the Future of the Internet?

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ABSTRACT

In the past two years, the Metaverse, which has become popular, has attracted a large amount of capital, like Alphabet, META, Tencent, Bytedance. They have all invested a lot of people and money in the development of the Metaverse. But what is the Metaverse, what can the Metaverse bring to the table, and what is the future of the Metaverse? This article studies the history and origin of the concept of the Metaverse, combines the views published by previous people to explore the role of Metaverse for today's society, and discusses in more depth the research and application of metaverse technology by these tech giants. This article discusses some questions. The first one is how the metaverse is being used by technology companies. Also, the mutual relations like the impact of the current environment on the development of the Metaverse, and the impact of the Metaverse on current social environment. However, some of the problems are not quite clear when we look at them in this day and age, and the Metaverse that people imagine has not yet been realized due to technical shortcomings and software and hardware defects. With the development of time, many technical problems may be solved in the future, and we expect to see the complete Metaverse.

Keywords: Metaverse, NFT, VR/AR, META

1. INTRODUCTION

The Metaverse integrates the virtual world with the real world. Technology companies are also arranging the Metaverse, which provides computing power and storage solutions for cloud computing.

How was the Metaverse born? The meta-universe is not an endless fantasy. Furthermore, it is a virtual world separate from the real world. VR technology, AR, holographic technology, and other forms are very similar to the meta-universe. In addition to technology, environmental factors also significantly affect the Metaverse development.

Virtual reality, artificial intelligence, big data, 5G communications, and other technologies make it possible to create a meta-universe. At present, the Metaverse is still far away from us, and the exploration direction of the Metaverse is infinite. The Metaverse will take at least 10 to 20 years to arrive.

First, it will bring further prosperity to the virtual goods market. Virtual goods are currently worth about $50 billion and are expected to grow to $190 billion by 2025. Second, it can promote the rapid development of AR/VR. The global AR/VR market is expected to grow at a cagr of 54% in the five years from 2020 to 2024, with spending of $12 billion in 2020. Total AR/VR device shipments reached 5.12 million units in 2020 and are expected to reach 43.2 million units in 2025. The third is to promote the rapid development of cloud computing further because the realization of the meta-universe needs enormous data storage and computing requirements. Fourth, for the content or platform builder itself, it can establish an immersive virtual world integrating social, entertainment, advertising, e-commerce, and other functions. Its commercial value will be geometrically improved with the extension of the user value chain.

The word "Metaverse" is made up of the prefix "meta" (meaning "beyond" or "meta") and the root "verse" (from the universe), which translates literally as "Metaverse." The concept, which originated in Neil Stephenson's 1992 science fiction novel Snow Crash, refers to a parallel digital world separated from the physical world, but always online, in which people can live as avatars.

The term Metaverse originated from Neil Stephenson's 1992 book Avalanche, which described a parallel virtual world, the Metaverse, in which all real-life people have online avatars. Wikipedia describes the Metaverse as a 3D virtual space based on the future Internet with link awareness and sharing features that exhibit convergence and physical persistence through virtually-enhanced physical reality.

Just like the scene in the movie ready Player One, one day in the future, people can switch identities anytime and anywhere, freely shuttle between the physical world and the digital world. The " meta-universe " is composed of virtual space and time nodes, studying, working, making friends, shopping, traveling, and so on in the "meta-universe" composed of virtual space and time nodes. Metaverse, a virtual world built on a blockchain, is a decentralized platform that gives players ownership and autonomy. Through an immersive experience, make virtual closer to reality.

"Meta-universe" has become a new fashionable term active in the capital circle. Overseas, large-scale meetings and exchanges use remote virtual characters on Facebook, and in China, Bytedance's massive acquisition of companies like Pico. Along with the changes in the capital market, it gradually affects every shareholder. More let this early a few years by the hot media technology concept jumped on the paper.

Media is the reaction of natural society. What distinguishes it is the faster and faster information transmission, the more specific information fantasy, and the law and direction of the media's iterative changes can be found in the media's meta-universe. Although predictions in this area are wrong, literature works by interpreting the fast-changing world in words. Nevertheless, the words are dull to keep up with fashion changes. Especially now, people do not have the patience to accept abstract knowledge, more willing to perceive the illusion formed by information in exceptional circumstances.

2. LITERATURE REVIEW

When people discuss the Metaverse concept, they have to talk about the concept of social media. Moreover, social media can be pervasive, and it penetrates every corner of an average person's life. The so-called social media should be the process of spontaneous contribution, extraction, and creation of news and information by many Internet users, and then dissemination. Two points need to be emphasized, one is a large number of people, and the other is spontaneous communication if the lack of these two factors will not constitute the concept of social media. Metaverse extends social media attributes with interesting IPs and novel experiences that allow many users to enter this environment. The solid social nature

attached to the Metaverse makes the dissemination channels and efficiency even higher. With the progress of technology, more and more people think social media has entered the era of mixed virtual reality, and various technology companies are working hard to develop VR, AR, and other technologies. That is Metaverse.

Based on Kim J. L. Nevelsteen's research, Kim J. L. Nevelsteen notes that A virtual world has no universally accepted definition. Advances in networking techniques such as host migration, mobile ad hoc networking, and distributed computing raise the question of whether architectures can support a virtual environment. Moreover, his article's findings break down which characteristics distinguish the various technologies. In conclusion, he mentions that, Because of the development of 5G networks, NFT, and cryptocurrencies [1]. Because of the rapid development of these technologies and the economic surplus caused by the massive capital investment. These surplus resources will naturally advance a technology that can make the technology more refined and make money available to spend. The Metaverse is a core technology that can connect these emerging technologies, which will grow at a rapid pace shortly. Also, from another research, John Dionisio points out that the current state of the Metaverse and the prospects for its development in different areas firstly. Then, he gives his opinion of the current procedure of the Metaverse and the required developments are described, what needs to be done in each field to reach the goal of the Metaverse, such as the gradual improvement of devices by institutions the people's interest of Metaverse. John Dionisio talks about some limitations of the development of Metaverse, and it is a highly complex concept that incorporates almost all high technologies. This has both good and bad effects on the development of the Metaverse. The good thing is that the Metaverse can integrate many kinds of leading technologies at the same time to create products that gather the core of human wisdom; the bad thing is that the ultimate value of the Metaverse lies in the experience, and if any of the technologies in the integration process does not meet the expectations of the experience, it will have a destructive effect on the realization of the Metaverse. For example, if the resolution of VR does not meet expectations and the network latency problem is not solved, then the complete version of the meta-universe cannot be reached. Some limitations in computational methods and unrealized collaboration between stakeholders and developers of virtual worlds will also obstruct the development of Metaverse [2].

3. HOW IS THE METAVERSE BEING SPREAD BY TECHNOLOGY COMPANIES?

Technology regularly generates shocks that no one could have predicted. However, the most significant events are frequently predicted decades in advance. The most frequent ideas about the Metaverse come from science fiction. The Metaverse is generally shown in this context as a kind of digital "jacked-in" internet — a depiction of actual reality. However, one is grounded in a virtual (often theme park-like) environment, such as that depicted in Ready Player One and The Matrix. While these kinds of experiences are likely to be part of the Metaverse, they are restricted in the same way that movies like Tron presented the Internet as a real digital "information superhighway" of bits.

3.1. Expanding process of the Metaverse

With the rapid improvement in technology, Metaverse has become a reality. This essay will discuss the impact of Metaverse on technology companies and the shift of views of people towards Metaverse. The hottest news on the use of Metaverse is Facebook. Facebook has changed its name to Meta, which has repositioned itself from a traditional social media company to the invention of the Metaverse. We have been bombarded with stories about the so-called "metaverse" in recent weeks, and Mark Zuckerberg's pursuit of this digital cosmos has increased its appeal. His enthusiasm is such that he has stated that he intends to transform Facebook from a social network to a metaverse corporation in the next five years [3]. With Meta's being optimistic about Metaverse, Nvidia, Sony, and Microsoft are among the other major technology giants that are also competing for the success of Metaverse. They have already created new technologies to make this dream come true because they have become the firm with the most investment in the Metaverse. The amount of money invested in R&D in 2020 reached up to 18.5 billion dollars, and this one will account for up to 30 percent of Facebook's income.

3.2. Opportunities of the Metaverse

Furthermore, it will create over 10,000 employments throughout Europe to bring the initiative to fulfillment. We will leave it up to Zuckerberg to fill in the blanks. Microsoft startled attendees at the most recent Ignite conference by introducing Mesh and their virtual reality bet aimed primarily at Teams and built on the momentum of its HoloLens2. The technology behemoth defines it as an opportunity that "enables presence and shared experiences from anywhere, on any device, via mixed reality apps." They also discuss avatars and "holoportation" in the workplace as a means to increase decision-making fluidity and problem-

solving speed. The Chinese giant is still in its early stages, but it has already registered for multiple metaverse-related trademarks and proclaimed its ambition to compete in this technological race [4]. The first trademark is Ali Metaverse, although Taobao and Dingding is also participating to bulid Metaverse. We will have to wait and see what happens. Sony, which has committed $1 billion in establishing its Metaverse, is another player. Epic Games, the company behind Fortnite and the Unreal Engine graphics engine, is in charge of its development [5]. Tim Sweeney, the co-founder of the video game firm, has been dreaming about this digital cosmos for years, and with this injection of funding, it may become a reality. On the other hand, Sweeny wants the Metaverse to be a truly open standard that may potentially replace the Internet, as opposed to Zuckerberg's concept of a monopoly. The Metaverse is not yet physically palpable, it is a revolutionary concept, and current technology is bringing it closer to reality, giving it economic significance. Based on experience, its implementation will be progressively added to the platforms, much like the Internet has done since its inception. It will be a revolution that affects every industry.

For the time being, Mark Zuckerberg is the one who is investing the most in this virtual environment. So much so that he has renamed his venerable social network Facebook "Meta." They claim that the Metaverse is the next generation of social connections and offers a 3D place where people may engage, study, cooperate and play in previously unseen ways. Even if the Metaverse is collaborative because several user participants may exist within a three-dimensional platform, we would have even less need to engage physically. The consequences would very certainly be fewer in-person communal meals, public rituals, celebrations, parties, and so on. People are beginning to worry about the beginning of Metaverse. The more we go away from reality, the more emotional coldness and remoteness we experience—the less interactive, the better. The less human it is. The highs have dropped, and the lows have risen. Any sort of protracted escapism, whether mind-altering drugs, television, gambling, pornography, or, it appears, the Metaverse, will accomplish this. We had a glimpse of this with the mental health crisis that coincided with the COVID-19 lockdowns – documented cases of despair and anxiety have increased as we segregated ourselves from one another, despite having technology at our disposal. Given how attached most people are to their screens, think how much more addicting and immersive the Metaverse will be once the senses are completely engaged. The consequences might include increased isolation, suicide, mental health problems, poor physical health, and so on. As a result, should just not society and public policy promote reality? To choose realism does not imply reverting to the days of the horse and

carriage [6]. It implies we may advocate for safeguards against technologies that, rather than advancing human freedom and wellbeing, constrain or even strangle it. Technology is a tool that has the potential to be magical. However, public policy should favor technology that enhances real-world living rather than escapism. There may be a narrow line between the two at times, but it is worth drawing. Society should reject them to the degree that metaverse applications are just an escape from reality. The Metaverse should be opposed entirely if it cannot be developed without increasing isolation from reality.

4. THE IMPACT OF METAVERSE ON THE SOCIAL ENVIRONMENT

Metaverse has the possible ability to replace the Internet as a figuring out/calculating. basic technology that runs a computer, but its hidden under development process may have little in common with the thing that came before it. The Internet comes from public research universities and U.S. government programs. This is partly because few in the people and businesses that are not part of the government understand the commercial possible power or ability within/possibility of the World Wide Web. However, it is also true that these groups are almost the only things/businesses with figuring out/calculating power, useful things/valuable supplies and desire-related. None of this is true when it comes to the meta-universe.

Not only is the people and businesses that are not part of the government fully aware of Metaverse's possible greatness or power, but it may also have the most believing that extreme methods must be used now to create huge changes in society beliefs in the future, and the most cash at least if it is willing to fund Metaverse R&D, the best engineering talent, and the most amazing hunger for victorious capture/romantic relationship. Big tech companies do not just want to lead Metaverse. They want to own and define the Metaverse. Open source projects with a non-related to big business belief system will still play an a big role - they will attract some of the very interesting showing the ability to create interesting new things minds in The Metaverse - but there may be only a few leaders in the early The Metaverse. What's more, people will know everyone.

Microsoft is a good example. The company has hundreds of millions of federated user identities through Office 365 and LinkedIn, is the second-largest cloud provider around the world, has a broad suite of work-related software and services across all systems/platforms/infrastructures, lots of shared online content/operations. Minecraft, Xbox + Xbox Live, and HoloLens offer a set of possible gateway experiences.

To that end, The Metaverse offers Microsoft an opportunity to take by force again/take control of again the OS/hardware leadership it gained during the change from one thing to another from PCS to mobile devices. However, more importantly, Chief Executive Satya Nadella understands Microsoft needs to be everywhere the work happens. While successfully changing to fit changes from business/project to consumer, PC to mobile, and offline to online, and still maintaining a most in control/most common position in the "work" process of people making, selling, and buying things, it is hard to imagine That Microsoft will not be the first or most important driver of processing in the future of labor and information virtualization.

4.1. The Plan of Tech Giants

Although Mark Zuckerberg, Facebook's chief executive, has not clearly and definitely announced his plan/purpose to develop and own The Metaverse, his something that people constantly think about/constantly thinking about something with it seems clear. That is clever. More than any other company, Facebook has suffered the most from The Metaverse because it will build a bigger, stronger and healthier social raised, flat supporting surface and represent a new figuring out/calculating basic technology that runs a computer and a new engagement raised, flat supporting surface. The Metaverse also allows Facebook to expand its stack. even though there is the existence of different efforts to build smartphone operating systems and send out and use related to people who use a product or service media experiences video, music, ebooks, audiobooks, video games radio, etc. and the third-party business set of principles for example, by Amazon, Amazon Channels putting into use, they are building their hopes that this will be the first significant game/rendering engine specifically designed for the computers that do work for you, but that are stored somewhere else and maintained by other companies time in history, is said to work on AR glasses, and is a leader in digital helpers in the home/office.

More importantly, founder/CEO Jeff Bezos is solid on basic equipment needed for a business or society to operate. For example, the web runs on AWS, Amazon's best business. 80% of its money income comes from "getting what is wanted by Amazon," The company sells, packages, and delivers products sold by other businesses, rather than buying them directly and then selling amount or quantity of items stored now, as most stores do. While Elon Musk's private outer space company SpaceX aims to fill up with people or other living things Mars, Bezos has made it clear that his goal with Blue Origin is to help space basic equipment needed for a business or society to operate almost the same as the early web rules of conduct and his AWS, so that "we can build giant chip factories in space and just

send them down a little bit." To that end, Amazon is probably more supportive of true "open" the Metaverse than any other FAAMG company, It does not need to control UX or ID because it benefits from a huge increase in back-end basic equipment needed for a business or society to operate usage and digital transactions.

The Internet is a source of data, and The Metaverse will have a lot more data and possibly a lot more payback than the web does today. On a related to being big enough to reach or serve the whole world, no one can better use this data than Google. Also, the company is not only the company that sells the most of an item in indexing the digital and physical worlds nearly 10,000 workers are involved in its mapping [7].

A professional writer was without any advance planning caught on camera during the widespread disease while interviewing without pants. However, in a virtual world, people can create a "fully armed" symbolic picture to reduce the chance of such a sudden unplanned bad event/crash.

4.2. The Technical Assistance of the Metaverse

Facebook's VR-based line in the distance where the Earth and sky meet Workrooms, a virtual meeting space for telecommuters, is an example of virtual reality VR and mixed reality MR going beyond physical Spaces. Its goal is to create a very interesting digital surrounding conditions where people's symbolic pictures can communicate, improve features that people want to use, and in the end reduce the company's rent to zero. We already see changes in the part/area during the widespread disease, and many companies that have built digital basic equipment needed for a business or society to operate are also making better money made/good things received with their workers working from home. Another big change during the widespread disease is education. As schools worldwide closed their doors during the lockdown, students were even told to study at home to reduce the risk of infection spreading. This has forced schools and the education community to come up with new ways of communicating, working together, and figuring out the worth, amount, or quality of. The number of tools needed to maintain working well and getting a lot done has exploded.

Just as the workplace in the meta-universe is very interesting, the classroom can be changed. It could have more social interaction, eliminate the sad/dark faces seen in video calls, and the learning process could even be satisfied.

Just as Defi will upset the current international money-based balance, Lee Kuan Yew of KAIST believes universities with the best digital basic equipment needed for a business or society to operate and internet-intelligent workers in general/hiring,

training, and firing department will become the new first-class universities.

Shopping online is already pretty convenient, with brands like Amazon and Flipkart offering fast delivery and a wide selection of brands. However, there are still issues to be worked out, such as exact measurements, problems in the refund process, and how a particular item looks in real life, especially when shopping for clothes.

Now Lenskart, an E-commerce company that sells eyeglasses in India, has taken the step of virtual fitting, using cameras to show how different frames look on people's faces. However, taking things a step further, people will not just buy for themselves. New ideas of virtual fashion and symbolic picture skins will come out, replaced by fashion houses and brands that may only exist online.

As people's working hours change, trying on clothes in virtual surrounding conditions may become more critical, and people's Symbolic picture in the Metaverse might pick out the right tie for people.

5. CONCLUSION

In this article, we have shown the central concept of the Metaverse. Also, some evidence can prove that the era of Metaverse is coming. We used several approaches to discuss the Metaverse. However, there are some limitations to this paper. For example, there is not much research on Metaverse in these years, so our sources are too narrow, or we may use outdated materials. Also, we believe some primary material would have made this paper better. For example, interviewing some of the top people in the field, such as Elon Musk or Mark Zuckerberg.

On the other hand, we do not know enough about the technical aspects of the Metaverse, such as NFT technology, or cryptocurrencies, etc. Perhaps a deeper understanding of these technologies would help us discuss the Metaverse better.

Finally, what does the future of the Metaverse look like? It is clear that these business giants are bullish on it, but there is still a long way to go for what people envision.

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